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CHAPTER 4 CONSTRUCTION PLANS

4.1 PURPOSE

The purpose of this chapter is to outline the requirements for Construction/Entrance plan submissions to DelDOT. General criteria for a plan submission are summarized as follows:

Plans must comply with DelDOT's *Development Coordination Manual* and all other applicable manuals. Construction plans must be signed and sealed by a land surveyor or professional engineer registered in Delaware. It is the engineer's responsibility to meet the standards and plan requirements. Plan approval does not release the responsibility of the developer and engineer to meet the standards. If geotechnical and/or structural design are included, then a professional engineer registered in Delaware and qualified to perform the design must sign and seal the plans.

4.2 CONSTRUCTION PLAN SUBMITTAL PROCESS

Construction plans shall be prepared showing the feasibility of constructing a subdivision street system and entrance(s) or commercial entrance(s) prior to recording the right-of-way with the land use agency. The construction stage fee must be paid prior to review of the construction plans as outlined in the Preface of this manual.

The applicant shall make revisions or additions to the design upon receipt of comments from DelDOT. If revisions are required, an electronic submission shall be made to the Subdivision Section. Once all comments have been addressed, electronically submit signed and sealed (pdf) plans for approval.

When design criteria cannot be met in accordance with DelDOT's requirements due to limitations particular to the site or where the applicant refuses to comply, the application for the intended use may be denied. When these conditions cannot be met or mitigated, a design deviation form should be completed and submitted to the Subdivision Section for review and approval.

4.3 SUBDIVISION CONSTRUCTION PLAN SUBMITTAL REQUIREMENTS

This section applies to the requirements for state maintained subdivision streets.

Any project submitted to DelDOT for review must contain all elements listed in this section and in accordance with the Gatekeeping Checklist, available on DelDOT's website in the Doing Business section. When a project is submitted for review, the submission will be checked to ensure that all required elements are on the plan and all necessary documents are included. If any elements are not relevant to the particular site then these elements shall be specified in the submittal letter or on the checklist. Incomplete submissions will be returned to the engineer for resubmission with no comments provided by DelDOT.

The subdivision construction plans shall be prepared in accordance with the requirements provided in this manual. The following elements are supplemental information required by DelDOT to be addressed and/or included on the construction plans. Failure to submit completed required documents will result in delays reviewing and approving submittals and/or declining the submission.

A. Completed Entrance Plan/Construction Plan Gatekeeping Checklist (Appendix D)

B. Completed Design Criteria form (Appendix D)

C. Completed Checklist for Subdivision Plan Approval (Appendix D)

D. Construction Stage Fee Calculation Form and associated fee

E. Entrance plan meeting the requirements of Section 4.3.7

F. Intersection Sight Distance Worksheet. Refer to http://www.deldot.gov/information/business/ under Subdivisions for worksheet.

G. Auxiliary Lane Worksheet. Refer to http://www.deldot.gov/information/business/ under Subdivisions for worksheet.

H. One copy of back-up calculations for design elements outlined in Chapter 5 (i.e. entrance design, sight distance triangles, typical section elements, pavement design, drainage design, and signing and striping) and a complete set of stormwater and sediment/erosion control drawings must be submitted for review with the plans

4.3.1 Subdivision Construction Plan Submittal Requirements - General Guidelines

The following items are required by DelDOT for Subdivision Construction Plan submittals:

A. The plan sheet size shall be 24" x 36" or 22"x36". Plan sheets of other sizes shall be returned without review.

B. Drafting work shall be neat, legible and reflect locations of existing and proposed features based on actual field surveys. All text height shall be 0.1 times the scale of the plan sheet. All text shall be legible when plans are produced at half size. Existing and proposed text and linestyles shall be distinguishable from each other.

C. Construction plans shall be drawn to a scale of 1" = 30'. In certain cases where clarity of plans can be maintained, a scale of 1" = 50' may be allowed at DelDOT's discretion.

D. Drainage system calculations for: total drainage area, total impervious area, peak discharge,

E. open and closed drainage systems, drainage spread on roadways, stormwater management, outfalls, etc.

4.3.2 Subdivision Construction Plan Submittal Requirements - Title Sheet

A title sheet shall include the following:

A. DelDOT project ID number (provided by DelDOT)

B. Name of subdivision

C. Section of the subdivision or name of the streets to be considered by this plan

D. Identification of subdivision streets as public or private (see Section 3.2.2)

E. General Location map showing the relationship of the site to existing state-maintained roadways. The location map shall be drawn to a scale of no less than 1 inch = 1 mile.

F. County in which subdivision is located

G. Total sheets in subdivision street construction plan

H. Plan view of entire subdivision indicating streets to be constructed in accordance with this plan and their relation to all other streets within the subdivision. Show north arrow for reference

I. General Notes (see Appendix J)

J. Index of sheets

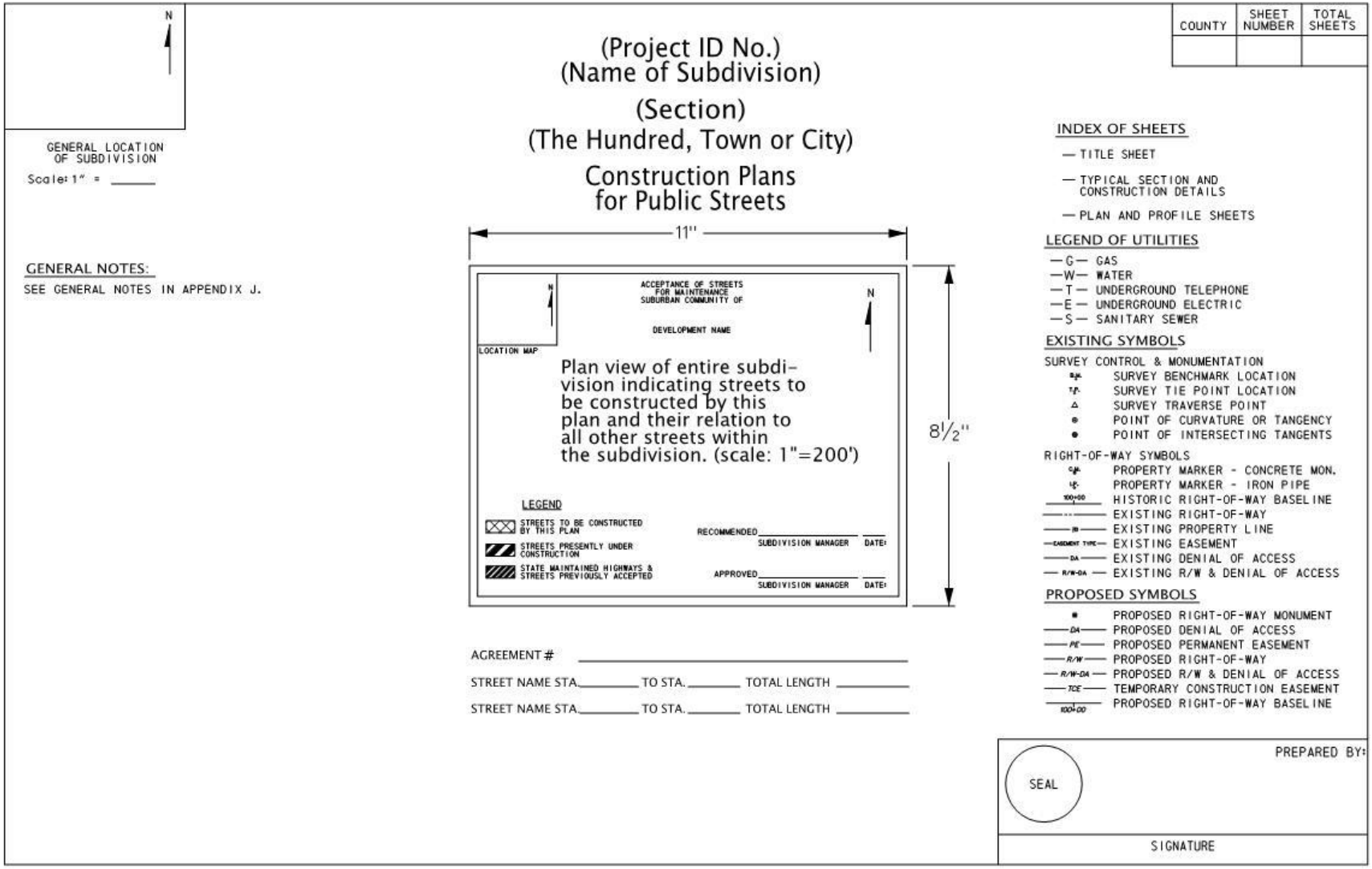
K. Legend for existing and proposed features (symbols, line types, etc)

L. Signature block:

1. Seal of individual properly licensed in Delaware to perform the engineering and design for the preparation of construction plans for subdivision streets
2. Signature of engineer and date

See Figure 4.3.2-a for a sample title sheet provided as general guidance.

Figure 4.3.2-a Sample Subdivision Title Sheet



4.3.3 Subdivision Construction Plan Submittal Requirements - Typical Section Sheets

Typical section sheets are required as part of subdivision construction plans. They are required for each major change of section and shall include the following:

A. Typical street sections for internal streets and frontage roads:

1. Existing and proposed widths of streets, lanes, shoulders, right-of-way and easements
2. Existing and proposed cross slopes of all lanes, shoulders and swales
3. Slope of roadside embankment (front slope and back slope)
4. Clear zone width and horizontal clearance
5. Proposed limit of construction
6. Point-of-Profile Grade Application and Point-of-Ditch Grade Application
7. Type of curb
8. Depth and type of pavement material
9. Locations to place topsoil, seed and mulch
10. Location of underdrains
11. Subgrade to be prepared in accordance with DelDOT *Standard Specifications*

B. Non-Roadside Ditches/Swales:

1. Width of ditch bottom
2. Point-of-Profile Grade Application (Ditches longer than 100 feet require a profile)
3. Side slopes
4. Type and depth of ditch protection
5. Locations to place topsoil, seed, and mulch
6. Existing and proposed easements

4.3.4 Subdivision Construction Plan Submittal Requirements - Detail Sheets

Detail sheets shall provide information to the contractor on construction that is not included in the *Standard Construction Details*, and shall include the following:

A. Special Details:

1. Intersection roads
2. Super-elevation diagrams (when required)
3. Bridges
4. Details of non-standard drainage structures
5. Pavement section(s)

B. Intersection Details (at 1”=10’):

1. Intersection radii with stations and offsets to curve points
2. Location by station and offset to islands
3. Grade elevations at edge of pavement at maximum interval of 25 feet on edge of pavement and 10 feet on intersection radii

4. Curb ramps and drainage inlets

C. Plan sheet index (separate sheet) for plan sets containing 5 or more Construction Plan sheets:

1. Sheet numbers
2. Total sheets
3. Streets
4. Street names

For general guidance on index setup, refer to DelDOT's Model Plans at:
http://www.deldot.gov/information/business/drc/modelplans.shtml

4.3.5 Subdivision Construction Plan Submittal Requirements - Plan Sheet

Plan sheets shall include the following:

A. General Plan Criteria:

1. Limits of construction
2. North arrow on each plan sheet
3. Right-of-way line, existing and proposed (dimensioned in accordance with Fig. 3.2.5-a)
4. Right-of-way monuments
5. Street names

B. Horizontal and vertical control data:

1. Benchmarks: Maximum spacing is 1,000 feet. Show elevation and location. Use NAVD 88
2. Centerline stationing and curve data (both horizontal and vertical)
3. Survey references to horizontal control points
4. Bearings of centerline tangents
5. Station equations of intersecting road baselines

C. Topography:

1. Topography shall extend beyond the limits of the property to include the proposed positive drainage outfall, critical features of the existing highway for a minimum distance beyond the proposed entrance location as specified in Figures 3.4.2-b, 3.4.2-c, and 3.4.2-d.
2. Contours showing the elevation of the existing ground within the limits of the topographic survey. The contour interval for various ground slopes shall be as follows:

Figure 4.3.5-a Contour Interval for Various Ground Slopes

Average Ground Slope	Contour Interval
Less than 0.5%	1.0 feet with spot grades
0.5% to 5.0%	1.0 feet
Over 5%	2.0 feet

D. Lot layout within the site showing relationship of lots to the proposed internal street system

E. Utilities:

Location of all existing and proposed sanitary sewer and water lines. A separate set of utility plan sheets may be required depending on the complexity of the plan sheet.

F. Drainage:

1. Location and elevations of parallel ditches every 50 feet
2. Location and type of ditch protection other than seed and mulch
3. Drainage flow arrows on pipes, underdrains, and ditches
4. Identify and locate drainage structures, storm sewers, and culverts with specific symbols
5. Location, flow line, elevation, typical section and ditch protection for culvert or storm sewer outfall
6. Pipe and drainage structures schedule shall be included on each plan sheet. These schedules shall list the structure ID, type, invert, and top elevation, pipe ID, size, length, invert elevations, slopes and type. See Figures 4.3.5-b and 4.3.5-c for storm drainage structure and pipe schedule.
7. Pipe angles shall be listed in the schedule and shall not exceed the maximum values listed in the pipe cover/angle spreadsheet available in the "Doing Business" section of DelDOT's website
8. Drainage easements, shown in accordance with Section 5.7.2.6

G. Construction plans shall be at a scale of 1"=30'. Enlargements may be needed to show additional details.

Figure 4.3.5-b Storm Drainage Structure Schedule

Structure	Description			T.G. Elev.	Invert In	Invert In	Invert In	Invert Out
	Box	Top Unit	Grate					

Figure 4.3.5-c Storm Drainage Pipe Schedule

Pipe	Description							Invert Elevation	
	From	To	Size	Type	Length	Class	Slope (%)	In	Out

4.3.6 Subdivision Construction Plan Submittal Requirements - Profile Sheet

Profiles shall be on same sheet as plan views, where possible. Profiles shall include the following:

A. Horizontal scale (shall be same as plan sheet)

B. Vertical scale (shall generally be 1" = 5')

C. Vertical Curve Data: PVC, PVI, PVT, length of curve, PVI Elevation, K value

D. Soil boring information (when available) – Use exaggerated scale and indicate type and depth of material

E. Drainage features – Identify drainage features with pipe or structure symbols that matches schedule

F. Existing and proposed utilities

G. Existing and proposed elevations every 50' at minimum

H. Longitudinal grades (%)

For general guidance on profile sheet setup, refer to DelDOT's Model Plans at:
http://www.deldot.gov/information/business/drc/modelplans.shtml

4.3.7 Subdivision Construction Plan Submittal Requirements - Entrance Plan Sheet

Entrance plans shall include the following:

A. Existing and proposed right-of-way, property lines and easements

B. Names and parcel information of abutting land owners

C. Existing and proposed pavement edges and material types

D. Existing and proposed utilities including all DelDOT infrastructure

E. Contours showing the elevation of the existing ground within the limits of the topographic survey. The contour interval for various ground slopes shall be shown in accordance with Figure 4.3.5-a. Topography shall extend to the limits as defined in Section 4.3.5-C.

F. Proposed contours

G. Location of any crossovers

H. Roadway curves

I. Existing and proposed entrances serving the adjacent properties on both sides of the road

J. Proposed sight distance easements

K. Existing and proposed drainage features

L. Location of existing and proposed buildings

M. Existing and proposed utility poles, signs, etc

N. Parking layout

O. Proposed entrance geometry, including entrance radii dimensions

P. Centerline stationing for the frontage road(s)

Q. Proposed curb and sidewalk grades

R. At a proposed entrance that requires widening to the existing State-maintained roadway, spot elevations on the proposed edge of pavement and where the proposed pavement meets the existing pavement shall be provided at 25-foot intervals. Spot elevations at the entrance radii shall be given at 10-foot intervals

S. Site specific entrance construction details. (A separate plan sheet may be required for details.) DelDOT standard details shall not be shown on plans

T. Proposed limit of construction

U. Traffic Generation Diagram (see Appendix M for example), showing the following:

   1. Site generated ADT and distribution (per the latest edition of the ITE Trip Generation Manual)
   2. Mainline ADT (existing and projected) and speed limit

V. Signing and striping plan with existing and proposed striping, including lane widths. A separate plan view or sheet may be required.

W. Existing traffic infrastructure, devices and systems including but not limited to signal and pedestrian poles, junction wells, inductive loops, cameras, conduit, weather equipment, pedestrian signals, cabinets and red light cameras

X. North arrow and Graphic scale (1" = 30' preferred, 1" = 20' acceptable)

Y. Typical sections as defined in Section 4.3.3

Z. Existing/Proposed transit facilities, pedestrian and shared-use pathways, pedestrian crossings and bicycle facilities

4.3.8 Subdivision Construction Plan Submittal Requirements - Maintenance of Traffic Sheet

A MOT plan must be prepared for all projects that have an impact to an active roadway. Depending on the complexity of the project, the plan may range from a short narrative on the plans referencing the MOT Typical Application in the DE MUTCD to a series of sheets detailing the traffic control measures for phased construction. Applicable MOT General Notes shall be placed on the plan. See Appendix J for General Notes for MOT.

4.3.9 Subdivision Construction Plan Submittal Requirements - Signal Plans

Signal plans may be required. Digital files shall be provided to DelDOT. Refer to Section 5.13 for more information on signal design.

4.3.10 Subdivision Construction Plan Submittal Requirements – Cross Section Sheets

Where subdivision construction plans include proposed improvements to frontage roads, cross sections shall be required. Cross sections shall be shown along the frontage road every 50 feet at even stations (e.g. 1+00, 1+50, etc.) and at critical and transition locations within the limits of improvements. Cross sections shall show the following information:

A. Existing and proposed widths of streets, lanes, shoulders, right-of-way and easements

B. Existing and proposed cross slopes of all lanes, shoulders and swales

C. Slope of roadside embankment (front slope and back slope)

D. Clear zone width and horizontal clearance

E. Proposed limit of construction

F. Point-of-Profile Grade Application

G. Existing and proposed curb, including curb type(s)

H. Depth and type of pavement material

I. Locations to place topsoil, seed and mulch

J. Location of underdrains

K. All existing and proposed drainage structures and utilities

4.4 COMMERCIAL ENTRANCE PLAN SUBMITTAL REQUIREMENTS

This section applies to the requirements for commercial entrances, as well as private subdivision entrances onto State-maintained roadways.

Any project submitted to DelDOT for review must contain all elements listed in this section and in accordance with the Gatekeeping Checklist, available on DelDOT's website in the Doing Business section. When a project is submitted for review, the submission will be checked to ensure that all required elements are on the plan and all necessary documents are included. If any elements are not relevant to the particular site then these elements shall be specified in the submittal letter or on the checklist. Incomplete submissions will be returned to the engineer for resubmission with no comments provided by DelDOT.

4.4.1 Commercial Entrance Plan Submittal Requirements – General Guidelines

The following items are required by DelDOT for Commercial Entrance Plan submittals:

A. The plan sheet size shall be 24" x 36". Plan sheets of other sizes shall be returned without review.

B. Drafting work shall be neat, legible and reflect locations of existing and proposed features based on actual field surveys. All text height shall be 0.1 times the scale of the plan sheet. All text shall be legible when plans are produced at half size.

C. Entrance plans shall be drawn to a scale of 1" = 30' (1" = 20' acceptable). Location map showing the relationship of the site to existing State-maintained roadways. The location map shall be drawn to a scale of no less than 1 inch = 1 mile.

D. Drainage report which will include calculations for: total drainage area, total impervious area, peak discharge, open and closed drainage systems, drainage spread on roadways, stormwater management, outfalls, etc.

4.4.2 Commercial Entrance Plan Submittal Requirements - Title Sheet

Title sheets shall include the following:

A. A title block containing:

1. DelDOT project ID number (provided by DelDOT)
2. Name of proposed business
3. Name of nearest town or city with name of applicable hundred or county
4. Road name and maintenance number of roadway being accessed
5. Scaled drawing of the project
6. Date and/or revised date
7. Name, address and telephone number of engineer or surveyor preparing plan
8. Seal of engineer or surveyor (Delaware license required)

B. A data block containing:

1. Type of business
2. Gross acreage of property
3. Gross leasable floor area
4. Parking spaces required
5. Parking spaces provided
6. Local government responsible for land use approval
7. General location map
8. North arrow
9. General Notes (see Appendix J)
10. Sheet index with total sheet count
11. Legend for existing and proposed features (symbols, line types, etc)

4.4.3 Commercial Entrance Plan Submittal Requirements - Entrance Plan Sheet

Entrance plans shall include the following:

A. Existing and proposed right-of-way, property lines and easements

B. Names and parcel information of abutting land owners

C. Existing and proposed pavement edges and material types

D. Existing and proposed utilities including all DelDOT infrastructure

E. Contours showing the elevation of the existing ground within the limits of the topographic survey. The contour interval for various ground slopes shall be shown in accordance with Figure 4.3.5-a. Topography shall extend to the limits as defined in Section 4.3.5-C.

F. Proposed contours

G. Location of any crossovers

H. Roadway curves

I. Existing and proposed entrances serving adjacent properties

J. Proposed sight distance easements

K. Existing and proposed drainage features

L. Location of existing and proposed buildings

M. Existing and proposed utility poles, signs, etc.

N. Parking layout

O. Proposed entrance geometry, including entrance radii dimensions

P. Centerline stationing for the frontage road(s)

Q. Proposed curb and sidewalk grades

R. At a proposed entrance that requires widening to the existing State-maintained roadway, spot elevations on the proposed edge of pavement and where the proposed pavement meets the existing pavement shall be provided at 25-foot intervals. Spot elevations at the entrance radii shall be given at 10-foot intervals.

S. Site specific entrance construction details. (A separate plan sheet may be required for details.) DelDOT standard details shall not be shown on plans.

T. Proposed limit of construction

U. Traffic Generation Diagram (see Appendix M for example), showing the following:

   1. Site generated ADT and distribution (per the latest edition of the ITE Trip Generation Manual)
   2. Mainline ADT (existing and projected) and speed limit

V. Signing and striping plan with existing and proposed striping, including lane widths. A separate plan view or sheet may be required.

W. Existing traffic infrastructure, devices and systems including but not limited to signal and pedestrian poles, junction wells, inductive loops, cameras, conduit, weather equipment, pedestrian signals, cabinets and red light cameras

X. North arrow and Graphic scale (1" = 30' preferred, 1" = 20' acceptable)

Y. Typical sections as defined in Section 4.3.3

Z. Existing/Proposed transit facilities, pedestrian and shared-use pathways, pedestrian crossings and bicycle facilities

4.4.4 Commercial Entrance Plan Submittal Requirements - Maintenance of Traffic Sheet

MOT must be accounted for on all projects. Depending on the complexity of the project, MOT requirements may range from notes or a short narrative on the plans referencing the MOT Typical Application in the DE MUTCD to a series of sheets detailing the traffic control measures for phased construction. Applicable MOT General Notes shall be placed on the plan. See Appendix J for General Notes for MOT.

4.4.5 Commercial Entrance Plan Submittal Requirements – Cross Section Sheets

Where subdivision construction plans include proposed improvements to frontage roads, cross sections shall be required. Cross sections shall be shown along the frontage road every 50 feet at even stations (e.g. 1+00, 1+50, etc.) within the limits of improvements. Cross sections shall show the following information:

A. Existing and proposed widths of streets, lanes, shoulders, right-of-way and easements

B. Existing and proposed cross slopes of all lanes, shoulders and swales

C. Slope of roadside embankment (front slope and back slope)

D. Clear zone width and horizontal clearance

E. Proposed limit of construction

F. Point-of-Profile Grade Application

G. Existing and proposed curb, including curb type(s)

H. Depth and type of pavement material

I. Locations to place topsoil, seed and mulch

J. Location of underdrains

K. All existing and proposed drainage structures and utilities

4.5 OFF-SITE IMPROVEMENT PLAN SUBMITTAL REQUIREMENTS

Prior to submittal of off-site improvement plans, the engineer shall schedule a pre-submittal meeting with DelDOT Development Coordination. It is recommended that this meeting should be held at least 12 months prior to the intended start of construction of the off-site improvements. The engineer shall complete and submit a design criteria form (Appendix L) prior to the meeting.

Any plan submitted to DelDOT for review must contain all elements listed in this section. When a plan is submitted for review, it will be checked to ensure the required elements are on the plan. If any elements are not relevant to the particular site then these elements shall be specified in the submittal letter. If all elements are not on the plan, the plan will be returned to the engineer for resubmission with no comments provided by DelDOT.

The developer's engineer shall prepare and submit all construction plans and right of way exhibits to DelDOT for review and approval for the project as outlined in the Off-site Improvement Agreement described in Chapter 2. All required submissions to internal DelDOT support sections shall be made to the Development Coordination Section and then shall be distributed throughout DelDOT in accordance with these regulations. The engineer shall design the project in accordance with the American Association of State Highway and Transportation Officials (AASHTO) *A Policy on Geometric Design of Highways and Streets*, DelDOT's *Road Design Manual* (RDM), and DelDOT Standards Specifications, Policies, and Practices. In instances where the engineer determines that the project cannot comply with these standards, the engineer shall provide to DelDOT a completed design deviation form (Appendix L). DelDOT shall have the final authority on any process modifications or design deviations.

The engineer shall coordinate with the utility companies to determine existing facility locations and to start the discussions on possible relocations.

Existing deeds, plot plans, existing roadway plans and field surveys shall be used to establish and verify the existing right-of-way and property lines. The engineer or surveyor is responsible for attesting to the right-of-way shown on the plans.

The engineer will work through the Development Coordination Section for pavement evaluation and design verification. This may include pavement cores and subgrade soils analysis. The engineer will work through the Development Coordination Section for hazardous material/contaminated site delineation.

The engineer will work through the Development Coordination Section to identify environmental or cultural resources that are present within the existing and/or proposed right-of-way. The engineer shall prepare, apply for, and obtain all necessary permits and environmental or historic documentation required by federal, state, and local authorities. Copies of the permits and supporting documentation shall be provided to DelDOT prior to final plan approval.

DelDOT will provide assistance in identifying but not obtaining all necessary permits and coordination for off-site road improvements. To construct the off-site improvements, the project may require, but not be limited to:

A. Right-of-way

B. Utility coordination

C. Permits associated with the Environmental Protection Agency's (EPA) Clean Water Act, Section 404

D. Permits associated with the Federal Highway Administration's (FHWA) Department of Transportation act of 1966, Section 4(f) regarding historical sites

E. Permits associated with the Federal Highway Administration's (FHWA) Land and Water Conservation Fund Act, Section 6(f) regarding parklands

F. Permits associated with the National Pollutant Discharge Elimination System (NPDES) regarding erosion control

G. Delaware Department of Natural Resources and Environmental Control (DNREC) Wtlands and Subaqueous Land Permit

4.5.1 Off-Site Improvement Plan Submittal Requirements - Content and Process

A. Off-site Improvement Plans shall be prepared in accordance with Construction Plan standards as established in Section 4.3 and the requirements outlined in this section. Review fees are not applicable to stand-alone, off-site improvement submittals. Submittal shall include the following items, along with the Off-site Improvement Gatekeeping Checklist and Design Checklist:

   1. Title sheet
   2. Plan sheet index
   3. Notes and legend sheet
   4. Typical sections as defined in Section 4.3.3
   5. Horizontal and vertical control points
   6. Construction plan with proposed design (including conceptual drainage layout and clear zone)
   7. Existing and proposed profile including existing and proposed drainage, underground utilities with test hole data, soil boring, and test holes plotted
   8. Grades and Geometrics showing where coordinates are to be given (edge of gutter, begin/end of transitions, and critical curve points) for proposed geometrics and tick marks where grades will be given (edge of gutter in intersections, super-elevation transitions, and critical points)
   9. Stormwater management plans and report or a waiver from the SWM Engineer
   10. Site specific construction details. (A separate plan sheet may be required for details.) DelDOT standard details shall not be shown on plans.
   11. Construction Phasing, M.O.T., and Erosion Control plans (with utility construction phasing taken into account)

12. Detour plans
13. Environmental Compliance Plan
14. Lighting plan, including proposed pole locations
15. Landscaping plan
16. Utility relocation plans, including overhead and underground utility relocations
17. Signing and striping and conduit plans
18. Signalization plans
19. Cross sections as defined in Section 4.3.10

Refer to DelDOT's Model Plans at: http://www.deldot.gov/information/business/drc/modelplans.shtml for a sample plan set.

B. DelDOT's Development Coordination Section will distribute the Construction Plans to the following stakeholders for review and comment:

1. Stormwater Engineer with Stormwater Report
2. Construction Management to review constructability and phasing
3. Traffic Section for review and comment pertaining to signal design, proposed signing and striping, and detour plan consideration
4. Roadside Development Administrator to determine tree replacement requirements and subsequent real estate needs, and to ensure proper selection of tree types for replacement policy. The engineer shall coordinate tree impact and mitigation analysis with a landscape architect.
5. Design Services Section for documentation of proposed impacts to environmental and cultural resources. Any permits that have been issued shall be made available to the Design Services Section. The engineer should also make Design Services aware of all correspondence that has occurred between the resource agencies and the developer.
6. Materials and Research
7. Chief Safety Officer
8. Bicycle/Pedestrian Coordinator
9. Architectural Accessibility Board (for approval)
10. DTC
11. Chief Engineer
12. Public Works
13. Others, as determined by the Subdivision Engineer

C. Depending on the complexity of the project, DelDOT may require the Developer to hold at least one Public Workshop. This workshop should be held soon after the initial plan submittal.

D. Signed and sealed Right of Way Exhibits shall be submitted to Development Coordination for review. The following elements must be included on Right of Way Exhibits:

1. Symbols and legends
2. Right of way plan view
3. Right of way data
4. Right of way tabulation (see Appendix D for the Right of Way Plan Checklist)

4.6 INDUSTRIAL PARK STREETS

Industrial park streets shall follow the standard construction plan development procedure, as previously outlined in Section 4.3.

4.7 STANDARDS AND SPECIFICATIONS

4.7.1 Standards and Specifications - Standard Construction Details

DelDOT has developed *Standard Construction Details* to provide consistency on State-maintained projects. *Standard Construction Details* are available on DelDOT's website (www.DelDOT.gov).

The *Standard Construction Details* shall be utilized in the construction unless there is some unusual circumstance requiring a special design. The plans shall show construction details only for those construction elements not shown in the *Standard Construction Details*.

If there are engineering elements, including but not limited to, structural designs required on a plan that are not included in the *Standard Construction Details*, then detailed engineering designs and calculations signed and sealed by a Delaware-registered professional engineer shall be submitted to DelDOT for review and approval. All structural elements shall be designed in accordance with AASHTO LRFD (Load and Resistance Factor Design) *Bridge Design Specifications* (latest revised edition).

The project shall be constructed using the latest revised *Standard Construction Details* in effect at the time of construction.

4.7.2 Standards and Specifications - Standard Specifications

Specifications for frequently used construction items have been prepared by DelDOT. Copies of these *Standard Specifications* are available online at (www.DelDOT.gov).

Construction shall be in accordance with the current DelDOT *Standard Specifications, Supplemental Specifications,* and any Special Provisions. Should it be necessary to construct an item for which a standard does not exist or where it is desired to modify the *Standard Specifications*, *Supplemental Specifications,* or Special Provisions, additional details and/or notes shall be included on the plans to adequately document any modified designs.

The project shall be constructed using the latest revised *Standard Specifications* and *Supplemental Specifications,* in effect at the time of construction, and the Special Provisions, as approved by DelDOT.